

**PATENT COOPERATION TREATY**  
**PCT**  
**INTERNATIONAL PRELIMINARY EXAMINATION REPORT**  
(PCT Article 36 and Rule 70)

REC'D 30 AUG 2005
WIPO PCT

Applicant's or agent's file reference 91.A0018WO35	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/IT 03/00859	International filing date (day/month/year) 29.12.2003	Priority date (day/month/year) 04.06.2003
International Patent Classification (IPC) or both national classification and IPC B65C9/18		
Applicant SIG TECHNOLOGY LTD.		

1. This International preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.
- This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).
- These annexes consist of a total of 4 sheets.
3. This report contains indications relating to the following items:
- I  Basis of the opinion
  - II  Priority
  - III  Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
  - IV  Lack of unity of invention
  - V  Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
  - VI  Certain documents cited
  - VII  Certain defects in the international application
  - VIII  Certain observations on the international application

Date of submission of the demand  02.12.2004	Date of completion of this report  31.08.2005
Name and mailing address of the International preliminary examining authority:   European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer  Wartenhorst, F Telephone No. +31 70 340-3641



**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/IT 03/00859

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, Pages**

1-3, 5-9                          as originally filed  
4                                  received on 26.07.2005 with letter of 25.07.2005

**Claims, Numbers**

1-14                              received on 26.07.2005 with letter of 25.07.2005

**Drawings, Sheets**

1/3-3/3                          as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- the language of publication of the international application (under Rule 48.3(b)).
- the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- contained in the international application in written form.
- filed together with the international application in computer readable form.
- furnished subsequently to this Authority in written form.
- furnished subsequently to this Authority in computer readable form.
- The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- the description,        pages:
- the claims,               Nos.:                15
- the drawings,            sheets:

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/IT 03/00859

5.  This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Yes: Claims	1-14
	No: Claims	
Inventive step (IS)	Yes: Claims	1-14
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-14
	No: Claims	

**2. Citations and explanations**

**see separate sheet**

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/IT 03/00859

**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

Reference is made to the following document:

D1: US-A-4 671 843 (OLSEN ROBERT F) 9 June 1987 (1987-06-09)

**1 INDEPENDENT CLAIMS 1, 13, 14**

- 1.1 The document D1 is regarded as being the closest prior art to the subject-matter of claim 1, and shows (the references in parentheses applying to this document): An aspirating roller (21) comprising pairs of pads (57, 64) and a portion of the lateral surface (43) of the roller between the pads is defined by an elastically deformable plate-like element (column 4, lines 10-18, figure 2).
- note 1 : The cylindrical member 42 in D1 has a circumferential covering 43 of rubber which has a *resilient* (elastically deformable) structure.
- note 2 : The lateral surface as disclosed in D1 (circumferential covering 43), can be considered as one plate-like element or as being composed out of multiple plate-like elements (or segments) of which each element comprises a pair of pads (57, 64), which is/are adhered onto the cylindrical member (42).
- 1.2 The subject-matter of claim 1 differs from this known aspirating roller in that the plate-like element has connecting portions which are fixed on each pad.

The subject-matter of claim 1 is therefore new (Article 33(2) PCT).

- 1.3 The problem to be solved by the present invention may be regarded as providing an easy replacement of the portion of the lateral surface of the roller between the pads in case of required adjustments or malfunctioning.
- 1.4 The solution to this problem proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons:  
An elastically deformable plate-like element having connecting portions which are fixed on each pad, provides the possibility of mounting and removing the element in case of required adjustments or malfunctioning.

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/IT 03/00859

1.5 The same reasoning applies, mutatis mutandis, to the subject-matter of the corresponding independent method claims 14 and 15, which therefore are also considered new and inventive.

**2 DEPENDENT CLAIMS 2-12**

Claims 2-12 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

**CONFIRMATION FAX**

4

**EPO - DG 1**

26.07.2005

mechanical deformations of the containers to be labelled.

(93)

Another object of the present invention is to provide a roller with a lateral surface that has adequate wear resistance and allows an efficient relative sliding between the label and the roller, when transferring the label on the container.

A further object is to achieve the aforesaid results in the context of a simple, rational and reliable constructive solution.

Said aims are fully achieved by the roller for transferring labels and by the related method, according to the present invention, which is characterised by the content of the appended claims ~~and in particular in that at least a portion of the lateral surface of the roller between the pads is elastically deformable~~.

~~In particular, in the preferred embodiment said lateral elastically deformable surface is defined by at least a plate like element.~~

The method is characterised by the content of claims 14 and 15 set out below.

**BRIEF DESCRIPTION OF DRAWINGS.**

These and other characteristics shall become more readily apparent from the following description of a preferred embodiment illustrated, purely by way of non limiting example, in the accompanying drawing tables, in which:

- Figure 1 shows a top schematic view of a labelling machine provided with a roller in accordance with the present invention;
- Figure 2 shows a constructive detail of the roller shown in Figure 1;
- Figures 3 and 4 show two global axonometric views of a plate like element

2. A roller as claimed in claim 1, characterized in that each pad (20;21) presents openings suitable for receiving said connecting portions of the plate-like element (6). >

10

## CLAIMS

1. An aspirating roller (1) for transferring labels, comprising at least a pair of pads (20;21) projecting relative to a lateral surface (1a) of the roller (1), characterised in that at least a portion of the lateral surface (1a) of the roller (1) between the pads (20;21) is elastically deformable, being

EPO - DG 1 2. A roller as claimed in claim 1, characterised in that said elastically  
26. 07. 2005 deformable lateral surface (1a) is defined by at least a plate-like element (6),

(93) 3. A roller as claimed in claim 2, characterised in that the plate-like element (6) has connecting portions which are ~~fixed~~ inserted into corresponding openings present on each pad (20;21).

< > 3. A roller as claimed in claim 2, characterised in that it comprises at least a dampening insert (9) interposed between a surface (8) not in view of the plate-like element (6) and a structural portion (1b) of the roller (1).

4. A roller as claimed in claim 3, characterised in that the dampening insert (9) is made of sponge-like material.

5. A roller as claimed in claim 3, characterised in that each pad (20;21) has a dovetailed coupling (20a;21a) so shaped as to be coupled with corresponding seats (10) obtained on the roller (1).

6. A roller as claimed in claim 5, characterised in that it comprises at least a stop element (11) removably fastened to the roller (1) and defining at least a portion (10a) of one of said seats (10), to maintain in position a pad (21) during the operation of the roller (1) to allow its possible removal when the roller is in resting condition.

7. A roller as claimed in claim 6, characterised in that the stop element

(11) is removably fastened to the roller (1) by means of a mechanical connection.

8. ~~9.~~ A roller as claimed in claim ~~8~~<sup>7</sup>, characterised in that the mechanical connection is constituted by at least a screw.
9. ~~10.~~ A roller as claimed in claim 1, characterised in that it comprises at least a dampening insert (5) interposed between a surface (22;23) not in view of each pad (20;21) and a structural portion (1b) of the roller (1).
10. ~~11.~~ A roller as claimed in claim ~~8~~<sup>2</sup>, characterised in that the connecting portions comprise a plurality of tabs (6a;6b;6c;6d) so shaped as to be inserted into corresponding slots (7) present on each pad (20;21).
11. ~~12.~~ A roller as claimed in claim ~~2~~<sup>1</sup>, characterised in that the plate-like element (6) has a plurality of holes (16) to allow the aspiration of a label.
12. ~~13.~~ A roller as claimed in claim ~~2~~<sup>1</sup>, characterised in that the plate-like element (6) is flexible and made of harmonic steel.
13. ~~14.~~ A method for removing an elastically deformable plate-like element (6), of the type present between a pair of pads (20;21) and defining a lateral surface (1a) of a transfer roller (1), characterised in that it comprises the following steps:
  - removing a stop element (11) for a pad (21) associated to the roller (1);
  - sliding the pad (21) along a lateral development of the roller (1), to disengage it from a seat (10) obtained on the roller (1) itself;
  - disengaging first connecting portions (6a;6b) of the plate-like element (6) from corresponding openings (7) present on the removed pad (21);
  - disengaging second connecting portions (6c;6d) of the plate-like element

- (6) from corresponding openings (7) present on a second pad (20);
- removing the plate-like element (6), now free.
14. 15. A method for mounting an elastically deformable plate-like element (6), of the type present between a pair of pads (20;21) and defining a lateral surface (1a) of a transfer roller (1), characterised in that it comprises the following steps:
- removing a stop element (11) for a pad (21) associated to the roller (1);
  - sliding the pad (21) along a lateral development of the roller (1), to disengage it from a seat (10) obtained on the roller itself (1);
  - inserting second connecting portions (6c;6d) of the plate-like element (6) into corresponding openings (7) present on a second pad (20) fastened on the roller (1);
  - inserting first connecting portions (6a;6b) of the plate-like element (6) into corresponding openings (7) present on the removed pad (21);
  - reinserting the removed pad (21) into the corresponding seat (10) present on the roller (1);
  - fastening the stop element (11) to the roller (1).

**Box No. VIII (iii) DECLARATION: ENTITLEMENT TO CLAIM PRIORITY**

*The declaration must conform to the standardized wording provided for in Section 213; see Notes to Boxes Nos. VIII, VIII (i) to (v) (in general) and the specific Notes to Box No. VIII (iii). If this Box is not used, this sheet should not be included in the request.*

Declaration as to the applicant's entitlement, as at the international filing date, to claim the priority of the earlier application specified below, where the applicant is not the applicant who filed the earlier application or where the applicant's name has changed since the filing of the earlier application (Rules 4.17(iii) and 51bis.1(a)(iii)):

in relation to this international application

CAPRARA Alessandro and CARMICHAEL James Frederick Robertson are entitled to  
claim priority of earlier application

No. PR2003A000041, IT, 4 June 2003

by virtue of the following:

the applicants are the inventors of the subject matter for which protection was sought by  
way of the earlier application.

This declaration is made for the purposes of the following designations for national and/or  
regional patents: US.



This declaration is continued on the following sheet, "Continuation of Box No. VIII (iii)".